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EXAMINER	
DOAN, DUC T	

ART UNIT	PAPER NUMBER
2188	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,579	MA ET AL.	
	Examiner	Art Unit	
	DUC T. DOAN	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-20 have been presented for examination in this application.

Claims 1-20 are pending in the Application.

Claims 1-20 are rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by other's in this country or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b) by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the

United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4,8-9,13, and 15-20 are rejected under 35 U.S.C. 102 (e) as being anticipated by Zimmer et al (US Pub. 2004/01582).

As in claim 1, Zimmer discloses a method comprising: initializing a plurality of media devices in communication with a computing device (par. 4-5, initializing components/devices) ; mapping information corresponding to each initialized media device to a plurality of memory locations of the computing device (Fig 3); and operating the initialized media devices based on the mapped information corresponding to each operated media device while the computing device is in a pre-OS environment (Fig 1 and 2, par. 16, devices are being operated for booting up the system).

As in claim 2, Zimmer further discloses wherein each media device is initialized at a different time period corresponding to each initialized media device (Fig 2, par. 16, each device is initialized at its distinct time period).

As in claim 3, Zimmer further discloses wherein each information corresponding to each initialized media device is mapped to a different memory location in the plurality of memory locations of the computing device (Fig 5, device's service is mapped to memory page as shown in Fig 5).

As in claim 4, Zimmer further discloses initializing a first media device in the plurality of media devices by the computing device during a first time period (Fig 1 and 4, par. 16, initializing a first device); mapping a first information corresponding to the initialized first media device to a first memory location in the plurality of memory

locations of the computing device (Fig 4 and 5, device's service is mapped to memory page as shown in Fig 5) ; initializing a second media device in the plurality of media devices by the computing device during a second time period (Fig 1 and 4, paragraph 16, initializing a second device); mapping a second information corresponding to the initialized second media device to a second memory location in the plurality of memory locations of the computing device (Fig 4 and 5, device's service is mapped to memory page as shown in Fig 5); and operating the initialized first and second media devices based on the mapped first and second information while the computing device is in the pre-OS environment (par. 16, devices are being operated for booting up the system).

As in claim 8, Zimmer further disclose selecting a plurality of media devices in communication with the computing device for initializing (Fig 2); and allocating and programming communication resources for the selected plurality media devices by the computing device (par. 16-17, PEI pre-initializing phase) prior to the initializing the plurality of media devices (par. 16-17, DEX phase initializing and set up the devices).

As in claim 9, Zimmer discloses a system comprising: a plurality of media devices in communication with a computing device and adapted for initialization by the computing device (Fig 1, par. 3); and a memory mapping logic adapted to map information corresponding to the initialized media devices to a plurality of memory locations in a system memory of the computing device (Fig 5), wherein the computing device is adapted to operate the initialized media devices based on the mapped information corresponding to each operated media device while the computing device is in a pre-OS environment (par. 16-17).

As in claim 13, Zimmer further disclose wherein the memory mapping logic is further adapted to map each information corresponding to each initialized media device to a different memory location in the plurality of memory locations of the computing device (Fig 5).

As in claim 15, Zimmer further discloses wherein the information corresponding to each initialized media device comprises at least one of data, instructions, and addresses (Fig 5, boot service comprises data instruction and addresses).

As in claim 16, Zimmer further discloses wherein the computing device is adapted to detect the media devices; and to allocate and program communication resources for the detected media devices prior to the initialization of at least one of the media devices (par. 17-18, PEI and DEX phases).

As in claim 17, Zimmer further discloses wherein at least one of the media devices comprises an on-board device and a plug-in device (Fig 7 726 monitor), wherein at least one of the on-board device and a plug in device comprises at least one of a video device, an audio device and a audio/video device (Fig 7 776 monitor).

As in claim 18, Zimmer discloses a storage medium that provides software that, if executed by a computing device, will cause the computing device to perform the following operations: initializing a plurality of media devices in communication with the computing device (Fig 7); and operating the plurality of initialized media devices while the computing device is in a pre-OS environment (par. 16).

As in claim 19, Zimmer further discloses wherein each media device is initialized at a different time period corresponding to each initialized media device (Fig 2).

As in claim 20, Zimmer further discloses further comprising software adapted to map information corresponding to each of the plurality of initialized media devices to a plurality of memory locations of the computing device, each of the plurality of memory locations being different memory locations (Fig 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-7,10-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmer et al (US Pat. 2004/0158828) in view of Cowperthwaite et al. (US Pub. 2005/0210158), herein Cow.

As in claim 5, Zimmer further discloses wherein the initializing a first media device by the computing device comprises (Fig 4 several devices are initialized concurrently during system boot): enabling input/output decoding for the first media device (par. 17-18, enabling i/o services); enabling memory decoding for the first media device (PEI initializing memory) ; loading and dispatching a service instructions corresponding to the first media device (par. 17 dispatcher 124); Zimmer does not expressly disclose the claim's specific details associating with switching modes. However, Cow further discloses obtaining a first memory information and a first mode corresponding to the first memory location; enabling a decoding of a display interface on a path of the first media device; and switching the first media device to the first mode (Fig 1, paragraphs 14 and 20, devices are alternating selected to be displayed, and enabling the selected devices connecting to a graphic/display device, i.e display interface. All meta-data of the device in display mode, must be obtained before the device is displayed., par. 18). It would have been obvious to one of ordinary skill in the art at the time of invention to include the method to share a device such as graphic device among different devices Fig 1 170 180, as suggested by Cow in Zimmer 's system and thereby devices can share the graphic display efficiently (Fig 3, pars 16-17, devices of machines vm110 120 can share display device 170 in an efficiently manner).

As in claim 6, Zimmer discloses wherein the initializing a second media device by the computing device (Fig 4 several devices are initialized concurrently during system boot) comprises:

wherein the initializing a second media device by the computing device comprises: input/output decoding for the first media device (par. 17-18 i/o service for devices); memory decoding for the first media device (Fig 5 memory of devices); input/output decoding for the second media device (par. 17-18 i/o service for devices); memory decoding for the second media device (Fig 5, memory of devices); loading and dispatching a services instructions corresponding to the second media device (par. 17 dispatcher 124); Zimmer does not expressly disclose the claim's details associating with switching the devices. However, Cow further discloses disabling the enabled device (the enabled device must be disabled when switching to another device); disabling the enabled decoding of the display interface on the path of the first media device (disable the connection of the enable device to the shared graphic device when switching, par. 20, when switching a device to "Focus" to be connected to the display 170, the other device will be disabled, i.e not connected to the display 170); obtaining a second memory information and a second mode corresponding to the second memory location; and switching the second media device to the second mode (par. 18, meta-data of the device to be displayed must be obtained; and the device is switched to a display mode). It would have been obvious to one of ordinary skill in the art at the time of invention to adopt the teaching of Cow in Zimmer 's system for the same reasons stated above.

As in claim 7, Zimmer further discloses wherein operating the first and second media devices based on the mapped first and second information (Fig 5) comprises: memory decoding for the first media device (Fig 5); Zimmer does not expressly disclose the claim's aspect of re-enable devices and interacting modes of devices. However,

Cow further disclose re-enable devices and interacting modes of devices (devices of VM 110 120 can be re-enable, switched to connect to a shared graphic device. Fig 3 shows devices of VM110 VM120 operate in an interactive manner). It would have been obvious to one of ordinary skill in the art at the time of invention to include the method to share a device such as graphic device among different devices Fig 1 170 180, as suggested by Cow in Zimmer 's system and thereby devices can share the graphic display efficiently (Fig 3, pars 16-17, devices of machines vm110 120 can share display device 170 in an efficiently manner).

As in claim 10, Zimmer a display interface decoder subsystem adapted to an input/output decoder subsystem adapted to decode input/output for each media device (par. 19, i/o service); a memory decoder subsystem adapted to decode memory instructions for each media device (Fig 5); a memory controller adapted to load and dispatch service instructions stored in the system memory (par. 17 dispatcher 124),

Zimmer does not expressly disclose the claim's aspect of display interface and switching modes. However, Cow discloses to obtain a memory information and decode a display interface on a path of each media device (par. 18-19, obtaining meta-data of the device to be displayed to display device 170); a mode corresponding to each memory location corresponding to each media device (each device to be displayed, i.e having a displayed mode, having meta-data in corresponding memory location, Fig 5), and a control logic adapted to switch the each media device to a mode corresponding to the switched media device (Fig 3, devices of VM 110 VM 120 are switched to display device 170). It would have been obvious to one of ordinary skill in the art at the time of

invention to include the method to share a device such as graphic device among different devices Fig 1 170 180, as suggested by Cow in Zimmer 's system and thereby devices can share the graphic display efficiently (Fig 3, pars 16-17, devices of machines vm110 120 can share display device 170 in an efficiently manner).

As in claim 11, Zimmer discloses wherein each of the service instructions corresponding to each media device comprises at least one of a video service instructions and an audio service instructions (Zimmer discloses a method that enable firmwares/services of any vendor, of any media such as CD, ROM disk etc... par. 5. The list may not be exhaustive, and it is clear that the teaching of Zimmer applies equally to other media such as floppy disk, dvd disk, tape etc which are other mainstream and well known media).

As in claim 12, Zimmer discloses wherein the video service instructions comprise an option ROM instructions (par. 4). Zimmer does not expressly disclose the claim's aspect of VGA interface. However, Cow discloses wherein the display interface comprises a video graphics array (VGA) interface (Fig 3). It would have been obvious to one of ordinary skill in the art at the time of invention to adopt the teaching of Cow to Zimmer's system for the same reasons stated above.

As in claim14, Zimmer does not disclose wherein at least one of memory location in the plurality of memory locations comprises a linear frame buffer. It would have been obvious to one of ordinary skill in the art at the time of invention to include the method to share a device such as graphic device among different devices Fig 1 170 180, as suggested by Cow in Zimmer 's system and thereby devices can share the graphic

display efficiently (Fig 3, pars 16-17, devices of machines vm110 120 can share display device 170 in an efficiently manner).

Response to Arguments

Applicant's arguments in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

A) Regarding Applicant's arguments at pages 7-8 for the rejections of claim 10 under 35 U.S.C 112 second paragraph, the arguments are persuasive and overcome the rejection stated in the previous office action dated 2/4/2009.

B) Regarding Applicant's arguments at pages 9-11 for the rejections of claims 1, 4, 8-9, 13 and 15-20 under 35 U.S.C 102(e), the arguments are not persuasive.

Applicant argues,

"In contrast, independent claims 1, 9, and 18 delineate: "initializing a plurality of media devices in communication with a computing device." *Emphasis Added.* The Examiner alleges that the system components correspond to the plurality of media devices in communication with the computing device (Office Action, page 3). Applicant respectfully disagrees. As delineated in the Specification, the term "media device" refers to any on-board or plug-in device, such as video cards, music players, or DVD players, for example, that is capable of storing video or audio data, such as movies, songs, etc." (See Specification, par. [0013] for further details) *Emphasis Added.* There is no teaching that the system

components initialized using various portions of the firmware code are a plurality of media devices….

As stated in Zimmer, BIOS is a firmware. Since firmware is not a device capable of storing video or audio data.. ‘’.

In response, Applicant appears to mischaracterize Zimmerman's teaching and mistaken equates the BIOS firmware as the device and thus not capable of storing video or audio data. Zimmer clearly teaches the media devices comprises physical component such as hard disks ,CD ROMs capable of storing any information, .i.e capable of storing for example music audio data, see par. 5. The media devices, i.e hard disks, CD ROMs include code to facilitate accessing information stored therein, i.e. each component may have optional ROMs, "..BIOS may be extended using one or more "Option ROMs" that are contained on one or more periphery device cards.. For example, SCSI device driver cards and video cards often include an option ROM…”, see par. 4. Therefore, Applicant’s arguments are not persuasive.

C) Regarding Applicant’s arguments at pages 11-13 for the rejections of claims 5-7, 10-12 and 14 under 35 U.S.C 103(a), the arguments are not persuasive.

Applicant argues,

“..In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

As discussed above, Zimmer does not disclose or render obvious each and every element as recited in independent claims 1, 9, and 18. Accordingly, a combination of Zimmer with Cowperthwaite in rejecting claims dependent thereon is improper:"

In response, Applicant fails to specifically pointing out any differences that make combination of Zimmer with Cowperthwaite improper. Therefore the argument is not persuasive.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 36 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the paragraph numbers, and/or line numbers and page numbers in the application to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on 571-272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Sanjiv Shah/

Supervisory Patent Examiner, Art Unit 2185